

REMARKS:

The office action dated October 8, 2003 has been reviewed and carefully considered. Claims 1-10 remain pending in this application, of which claims 1, 5 and 8 are independent claims and have been amended. Reconsideration of the above-identified application, as amended and in view of the following remarks, is respectfully requested.

Claim 1 stands rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Hironobu et al (JP 04-204523). Claims 1-10 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Booth (US 5,016,958).

Applicant respectfully submits that the claims of the present invention recite features neither taught nor suggested by Hironobu or Booth. In particular, such features include: "...an external power source coupled to said heating line for generating heat thereto such that the uniformity of the temperature distribution and the refractive index of the PLC is maintained", as amended in Claim 1. Support for this can be found at least in page 7, line 10-12. Similar features are recited in claims 5 and 8.

The present invention discloses that the heating line is arranged uniformly and closely on the lower surface of the PLC in order to obtain a uniform temperature distribution and refractive index of the PLC. Support for this can be found at least in page 8, line 6-8.

In contrast, Hironobu teaches forming the heating electrode (3) having an optical waveguide pattern on the upper or undersurfaces of an optical waveguide layer. As such, the need for positioning the heating electrode during the manufacturing process is obviated, thus saving manufacturing time. The refractive index of the heated part of the

optical waveguide layer (2) becomes higher than the non-heated part.

Booth teaches the use of a photohardenable film and layers to make an optical switch. The switch may be part of an overall integrated optical network and has two legs or waveguides. The material in the waveguide is designed to have an index of refraction that differs from its surroundings (Fig. 3) within the same layer. Therefore, by this local alteration of the index of refraction of the optical waveguide, light switching from one leg to the other leg occurs.

Accordingly, applicant respectfully submits that both references fail to teach or show a uniform temperature distribution and index of refraction of the PLC, as recited in claim 1.

Claims 5 and 8 contain a similar feature as in Claim 1, thus urged patentable for the same reasons invoked above.

Therefore, reconsideration and withdrawal of this ground of rejection are respectfully requested.

The other claims in this application are dependent upon independent claims 1, 5 and 8 discussed above and are therefore believed patentable once the independent claims are allowed. Since each dependent claim is also deemed to define an additional aspect of the invention, however, consideration of patentability of each on its own merits is respectfully requested.

U.S. Serial 09/974,630

Atty Docket 5000-1-230

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to kindly contact the undersigned at the telephone number listed below. If there are any fees due and owing, please charge Deposit Account No. 502-470.

Respectfully submitted,

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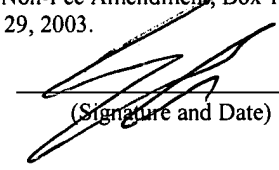
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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to the COMMISSIONER FOR PATENTS, Mail stop Non-Fee Amendment, Box 1450, Alexandria, Virginia 22313-1450 on December 29, 2003.

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(Signature and Date)